

● steinel



mobile heat MH3
mobile heat MH5

mobile heat MH3 tool features

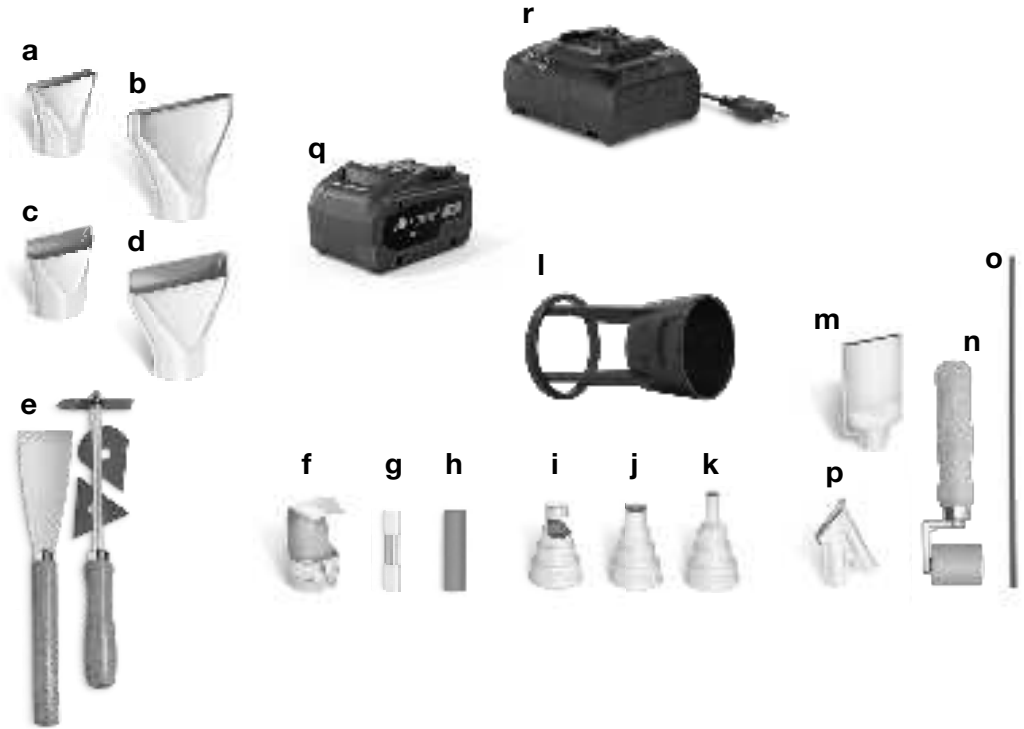


mobile heat MH5 tool features

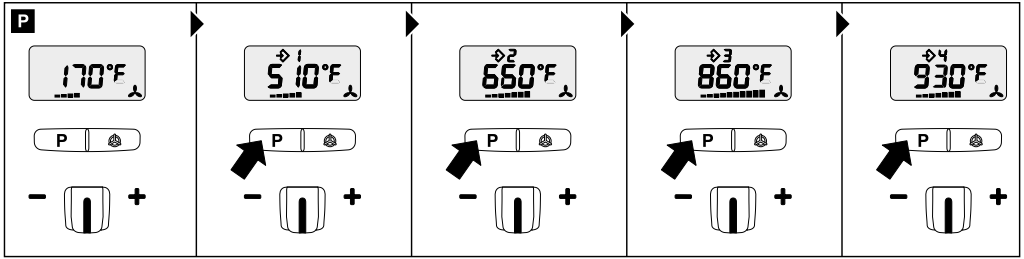


		mobile heat MH3	mobile heat MH5
U	V	18	18
T	°F	570/930	120-930
t	sec.	5	4
Q	l/min	max. 200	max. 300
LpA	dB (A)	< = 70	< = 70
a _h	m/s ²	< 2.5	< 2.5
m	g	500	600

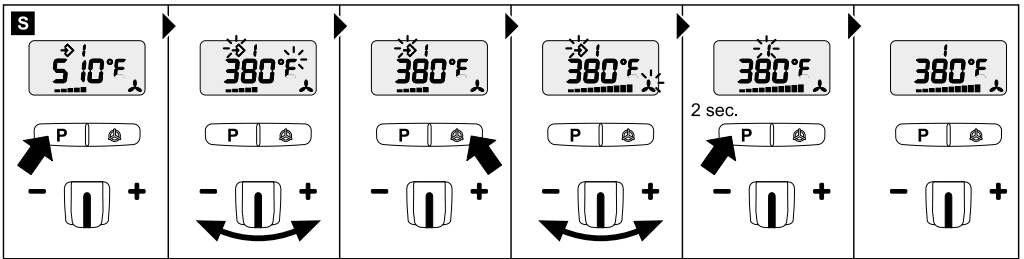
Accessories



Program mode (only MH5)



Memory function (only MH5)



IMPORTANT SAFETY INSTRUCTIONS

READ THESE INSTRUCTIONS

UL WARNING: Read this instruction book before using. To reduce risk of fire or electric shock, do not expose to rain or moisture. Store indoors. When servicing, use only identical replacement parts. When using electric tools, basic safety precautions should always be followed to reduce risk of fire, electric shock and personal injury. This hot air gun operates at 950°F with no visual indication of temperature (no flame). Never leave device unattended. Otherwise risk of fire. The heat stream at the outlet nozzle will burn flesh. Do not turn on hot air tool with hand in front of nozzle. **DO NOT USE NEAR COMBUSTIBLE LIQUIDS. DO NOT USE FOR:** ● Heating gas engines ● Heating car batteries ● Thawing refrigerator equipment.

WARNING: Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known (to the State of California) to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints,
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

WARNING!

This tool is capable of producing temperatures up to 950°F of flameless heat at the nozzle. **ALWAYS:**

- Direct the heat away from yourself and others.
- Prevent ignition of combustible materials on or near the workpiece.
- Prevent blockage of intake and nozzle openings.
- Keep a fully charged fire extinguisher on hand.
- Allow the nozzle and accessory tips to cool to room temperature before storage.

Cautions

1. **WARNING:** Hidden areas such as behind walls, ceilings, floors, soffit boards and other panels may contain flammable materials that could be ignited by the hot air tool when working in these locations. The ignition of these materials may not be readily apparent and could result in property damage and injury to persons. Do not use if in doubt about this hazard. When working in these locations, keep the hot air tool moving in a back-and-forth motion. Linger or pausing in one spot could ignite the panel or the material behind it.
2. This hot air tool can produce up to 950°F of flameless heat at the nozzle. Do not direct airstream at clothing, hair or other body parts. Do not use as a hair dryer.
3. Do not use near flammable liquids or in an explosive environment (fumes, gases or dust). Remove materials or debris, that may become ignited from work area.
4. Always hold tool by plastic enclosure. The metal nozzle requires approximately 20 minutes to cool to a point when it can be touched. Do not touch nozzle or accessory tips until cool.
5. Do not store tool until nozzle has cooled to room temperature. Place tool in a clear area away from combustible materials while cooling.
6. Do not cut off airflow by placing nozzle too close to workpiece. Keep intake vents clean and clear of obstructions.
7. Place tool on a level surface when tool is not hand held. Place cord in a position that won't cause tipping.
8. Do not leave tool unattended while it is running or cooling down. Otherwise risk of fire.
9. Keep a fully charged fire extinguisher nearby.
10. Do not direct airflow directly on glass.
11. Shield materials around the heated area to prevent damage or fire.
12. Use only with batteries specified in this manual.

13. Do not use in wet conditions.
14. Not to be used by children. This is not a toy and should be respected.
15. Do not use in bath or over water.
16. Safety glasses should be worn when using this tool.
17. It is recommended that leather gloves be worn when using a hot air tool.
18. Always unplug after use.
19. **WARNING:** Extreme care should be taken when stripping paint. The peelings, residue and vapors of paint may contain lead, which is poisonous. Any pre-1977 paint may contain lead and paint applied to homes prior to 1950 is likely to contain lead. Once deposited on surfaces, hand to mouth contact can result in the ingestion of lead. Exposure to even low levels of lead can cause irreversible brain and nervous system damage; young and unborn children are particularly vulnerable. Before beginning any paint removal process you should determine whether the paint you are removing contains lead. This can be done by your local health department or by a professional who uses a paint analyzer to check the lead content of the paint to be removed. **LEAD-BASED PAINT SHOULD ONLY BE REMOVED BY A PROFESSIONAL AND SHOULD NOT BE REMOVED USING A HOT AIR TOOL.**
20. Do not allow dust, debris or other contamination to enter the heat blower air intake. They may ignite or cause damage to the tool.

Persons removing materials should follow these guidelines.

1. Move the workpiece outdoors. If this is not possible, keep the work area well ventilated. Open the windows and put an exhaust fan in one of them. Be sure the fan is moving the air from inside to outside.
2. Remove or cover any carpets, rugs, furniture, clothing, cooking utensils and air ducts.
3. Place drop cloths in the work area to catch any residue. Wear protective clothing such as extra work shirts, overalls and hats.
4. Work in one room at a time. Furnishings should be removed or placed in the center of the room and covered. Work areas should be sealed off from the rest of the dwelling by sealing doorways with drop cloths.
5. Children, pregnant or potentially pregnant women and nursing mothers should not be present in the work area until the work is done and all clean up work is complete.
6. Wear a dust respirator mask or a dual filter (dust and fume) respirator mask which has been approved by the Occupational Safety and Health Administration (OSHA), the National Institute of Safety and Health (NIOSH), or the United States Bureau of Mines. These masks and replaceable filters are readily available at major hardware stores. Be sure the mask fits. Beards and facial hair may keep masks from sealing properly. Change filters often. **DISPOSABLE PAPER MASKS ARE NOT ADEQUATE.**
7. Use caution when operating the hot air tool. Keep the hot air tool moving as excessive heat will generate fumes which can be inhaled by the operator.
8. Keep food and drink out of the work area. Wash hands, arms and face and rinse mouth before eating or drinking. Do not smoke or chew gum or tobacco in the work area.
9. Clean up all removed residue and dust by wet mopping the floors. Use a wet cloth to clean all walls, sills and any other surface where residue or dust is clinging. **DO NOT SWEEP, DRY DUST OR VACUUM.** Use a high phosphate detergent or trisodium phosphate (TSP) to wash and mop areas.
10. At the end of each work session put the residue and debris in a double plastic bag, close it with tape or twist ties, and dispose of properly.
11. Remove protective clothing and work shoes in the work area to avoid carrying dust into the rest of the dwelling. Wash work clothes separately. Wipe shoes off with a wet rag that is then washed with the work clothes. Wash hair and body thoroughly with soap and water.

SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

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Battery

- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to battery pack, picking up or carrying the appliance. Carrying the appliance with your finger on the switch or energizing appliance that have the switch on invites accidents.
- Disconnect the battery pack from the appliance before making any adjustments, changing accessories, or storing appliance. Such preventive safety measures reduce the risk of starting the appliance accidentally.
- Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- Use appliances only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws and other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns. (This advice is considered correct for conventional NiMH, NiCd, lead acid and lithium-ion cell types. If this advice is incorrect for a cell design that differs from these, then the correct advice may be substituted.)
- Do not use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
- Do not expose a battery pack or appliance to fire or excessive temperature. Exposure to fire or temperatures above 265°F may cause explosion. The temperature of 130°C is equivalent to the temperature of 265°F.
- Follow all charging instructions and do not charge the battery pack or appliance outside of the temperature range specified in the instructions. Charging improperly or at temperatures outside of the specified range may damage the battery and increase the risk of fire.
- Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.
- Do not modify or attempt to repair the appliance or the battery pack (as applicable) except as indicated in the instructions for use and care.
- Protect the rechargeable battery and the tool from heat, moisture, water, for example, and also from continuous sunlight and fire. Risk of explosion!
- The rechargeable battery may only be removed as described in these instructions.
- Do not open the tool or the rechargeable battery. This could cause a short circuit. In the event of problems, contact your retailer.
- Do not touch any electrolyte fluid that has escaped. Do not get electrolyte fluid in your eyes. Immediately move tool away from naked flame or sources of heat. Immediately remove contaminated clothing.
- If electrolyte does escape from the battery, the following action is necessary:

Contact with eyes

Immediately rinse eyes with copious quantities of clean water, such as tap water, but do not rub. Seek medical attention. Failure to take the appropriate action can result in loss of sight.

Contact with skin

Immediately wash the areas affected with copious quantities of clean water, such as tap water, or skin irritation may occur. If the chemical penetrates clothing, take off clothing immediately and wash the skin with water. If irritation persists after washing it off, seek medical attention.

Inhalation

If the rechargeable battery is damaged or used improperly, vapours or electrolyte fluid may escape. Provide fresh air and seek medical attention if you feel unwell or discomfort occurs. The vapours may cause respiratory irritation.

- The lithium-ion rechargeable battery can be recharged at any time without shortening its lifespan. Interrupting the charge cycle will not damage the rechargeable battery.
- If the tool is not going to be used for a prolonged period, remove the rechargeable battery from the tool. This will prolong the life of the lithium-ion rechargeable battery.

- When not in use, keep the rechargeable battery away from paper clips, coins, keys, nails, screws and other small metal objects that could short-circuit the contacts. A short circuit between the rechargeable battery contacts may result in burns or fire.
- Do not short-circuit the rechargeable battery. Risk of explosion!
- Make sure the tool is switched off before you insert the rechargeable battery. Inserting a battery into a power tool that is switched on can result in accidents.
- Only charge the batteries in chargers that are recommended by the manufacturer. A charger that is only suitable for charging specific batteries presents a fire risk if it is used for charging other batteries. Use only those rechargeable batteries in power tools which are intended for them. Use of other rechargeable batteries may result in injuries and fire hazard.
- Protect the rechargeable battery from moisture and water. Only store the rechargeable battery in a temperature range of 45°F to 120°F. For example, do not leave the battery inside a car in summer. Occasionally clean the rechargeable battery's ventilation slots with a soft, clean and dry brush.
- Only use genuine Metabo or CAS (Cordless Alliance System) battery packs and accessories.
- Battery packs marked CAS are 100% compatible with CAS (Cordless Alliance System) devices.
- The chargers are only suitable for charging Metabo and CAS (Cordless Alliance System) battery packs.

Transportation

To transport the tool, remove the battery pack.

Transporting li-ion battery packs

Shipping a li-ion battery pack is subject to regulations on the carriage of dangerous goods (UN 3480 and UN 3481). When shipping li-ion battery packs, ascertain the regulations currently in effect. If necessary, obtain information from your carrier. Certified packaging is available from Steinel.

Only ship battery packs if the housing is intact and not leaking any liquid. For shipment, remove the battery pack from the machine. Insulate the contacts to prevent short-circuiting (e.g. with adhesive tape).

Tool description - Operation

Please note: The distance from the object you are working on depends on material and intended method of working. Always try out the airflow and temperature on a test piece first. Using the attachable accessory nozzles (see accessories page on the cover) the flow of hot air can be controlled with maximum precision.

Take care when changing hot nozzles! When using the hot air tool in the self-resting position, make sure it is standing on a stable, non-slip and clean surface.

Outlet nozzle, nozzle attachment and air delivery can reach a temperature of over 930 degrees Celsius!

Beware of burns! After skin contact with hot materials, immediately cool with cold water. If necessary, seek medical attention.

SAVE THESE INSTRUCTIONS

Thank you

Thank you for choosing a STEINEL hot air tool. This tool can be used for completing a wide range of jobs safely and reliably, such as soldering, welding PVC, shaping, drying, shrink-fitting, stripping paint, etc. All STEINEL tools are manufactured to the highest standards and undergo a strict process of quality control. Used in the proper manner, this hot air tool will give you lasting satisfaction.

About this document

Please familiarise yourself with these operating instructions before using this product because prolonged reliable and trouble-free operation will only be ensured if it is handled properly.

We hope your new hot air tool will give you lasting satisfaction.

Please read carefully and keep in a safe place.

- Under copyright. Reproduction either wholly or in part only with our consent.
- Subject to change in the interest of technical progress.

Proper use

- STEINEL mobile heat cordless hot air tools are intended for shaping and welding plastic as well as for heating shrink tubing. They are also suitable for soldering, tin-plating and undoing bonded joints.
- The battery packs (18 V / 8.0 Ah) that may be included are intended for use in Steinel cordless power tools with which they are compatible. Only charge using CAS/Metabo chargers. To select the correct tools, please contact your retailer. Details can be found in the directions for use provided with the charger. The user alone is responsible for any damage resulting from improper use. Generally acknowledged regulations on the prevention of accidents as well as the safety precautions must be observed.

For your safety

The thermal cut-out shuts the tool down if it is overloaded. The cordless mobile heat hot air tools are also equipped with a safety lockout. This prevents the tool from switching on unintentionally.

Conversion °C to °F

°C	= °F
100	212
200	392
300	572
400	752
500	932

Conversion °F to °C

°F	= °C
100	38
200	93
300	149
400	204
500	260
600	316
700	371
800	427
900	482

Tool features

1	Stainless steel outlet nozzle
2	Removable guard sleeve
3	Multifunction hanger
4	Air inlet
5	Temperature selection display (mobile heat MH3 only) LCD display (mobile heat MH5 only)
6	Button for airflow mode (mobile heat MH5 only)
7	Button for selecting programmes and memory button (mobile heat MH5 only)
8	Joystick
9	Ergonomic soft grip
10	Rechargeable battery release catch
11	CAS tool rechargeable battery 18 V 8 Ah
12	Rechargeable battery state-of-charge indicator
13	Button for state-of-charge indicator
14	LED light
15	Safety lockout
16	ON/OFF switch

Startup

Battery pack

Charge the battery pack **11** before use. Recharge the battery pack if performance drops. The ideal storage temperature is between 50°F and 90°F. The permissible charging temperature is between 32°F and 120°F. The rechargeable battery switches off at a temperature over 160°F and remains switched off until it returns to the optimum temperature range.

"Li-Power, LiHD" li-ion battery packs have a capacity and signal indicator **12**:

- Press button **13** and the state of charge is indicated by the LED lights.
- If an LED light flashes, the battery pack is almost drained and needs to be recharged.

The following rechargeable batteries are compatible with the cordless hot air tools: mobile heat MH3 and mobile heat MH5

- 18 V DC, 5.5 Ah STEINEL (321001180)
- 18 V DC, 8.0 Ah STEINEL (321001170)

Rechargeable battery state-of-charge indicator

The four green LEDs on the battery state-of-charge display **13** indicate the rechargeable battery's state of charge **11**. It is only recommended to check the state of charge when the power tool is at a standstill because the state-of-charge display is far less accurate while the tool is in operation.

Press button **13** to display the state of charge (can also be done with the rechargeable battery removed). The state-of-charge display goes out automatically after approx. 5 seconds.

Inserting rechargeable battery

From the front, slide the charged battery **11** into the base of the hot air tool. Push the rechargeable battery all the way into the base until it clips into place.

Switching on the tool

Push safety lockout **15** in the direction of the arrow and then press ON/OFF switch **16**.

Switching OFF: release the ON/OFF switch **14**.

Removing, inserting battery pack

Removing: press button **10** to release the battery pack and detach battery pack **11**.

LED	Capacity
Permanent light 4 × green	≥ 3/4
Permanent light 3 × green	≥ 2/4
Permanent light 2 × green	≥ 1/4
Permanent light 1 × green	< 1/4
Flashing light 1 × green	Low battery

If no LED lights up after pressing button **12**, the rechargeable battery is faulty and must be replaced.

Getting started - mobile heat MH3

The first time the tool is switched on at switch **16**, the temperature factory setting is 570°F. This can be seen by the LED light under the temperature on the temperature selection display **5**. As soon as the tool is switched on, the heating element is supplied with energy and the motor starts to run, initially a low speed. For better handling, the mobile heat MH3 is provided with a temperature priority function. This ensures delivery of a constant temperature at all times and controls blower speed in relation to the temperature delivered. To set the temperature to 930°F, move the joystick **8** to the right. The LED on the right-hand side of the temperature selection display **5** lights up when the temperature reaches 930°F. To return to 570°F, move the joystick to the left.

Getting started - mobile heat MH5

The temperature of the mobile heat MH5 can be adjusted with the cordless hot air tool switched off. To do this, press any button on the back of the tool below the display. The temperature can be infinitely varied over a range of 120°F - 930°F on the control panel with LCD display. The actual temperature is measured at the nozzle outlet and indicated on the display. The joystick **8** is used as an input button with plus/minus function. The temperature setting range begins at 120°F and ends at a maximum of 930°F. Briefly pressing the "+/-" joystick increases or reduces the temperature setting in 50°F steps. Keeping the joystick pressed speeds up the temperature setting process. Once the temperature has been set, the tool takes a few seconds to reach temperature (depending on speed/airflow). The temperature setting selected is shown on the display for 3 s. The display then shows the current actual temperature. The "°C/°F" symbol continues to flash until the selected temperature is reached.

If you wish to alter the setting, simply move the joystick again to increase or reduce the temperature. After switching off, the hot air tool stays in the last setting.

Setting airflow rate

To change the airflow rate, first press the "airflow" button ; the fan symbol flashes. Now use the joystick to set the airflow rate. The airflow rate setting mode automatically closes if the airflow rate setting is not changed within 5 seconds. Pressing the airflow button again after setting the airflow rate immediately closes the airflow rate setting mode. The airflow rate can be varied from a minimum of 150 l/min to a maximum of 300 l/min. Depending on battery capacity, the full 300 l/min airflow rate may no longer be reached. If you select a higher airflow rate setting in this case, the motor will still not run any faster because of the battery's low capacity. The bars on the LCD will flash to indicate the current airflow rate. In this case, replace the rechargeable battery or charge the battery currently fitted.

Programming mode [P]

Besides normal operating mode, the mobile heat MH5 also has four factory-set programmes for the most frequent jobs.

Press button "P" for programming mode **8**.

Number 1 is displayed for programme 1. Continuing to press the programme button will take you to programmes 2-4. Pressing the button again will return the tool to normal operation. See page 3.

Preset programmes

Programme	Temp. °F	Airflow rate	Application
P2	752	approx. 7 cfm	Heat-shrinking
P2	572	approx. 9 cfm	Welding plastics
P3	932	approx. 9 cfm	Joining sheeting
P4	482	approx. 11 cfm	Car-wrapping

Memory function [S]

The values selected for the four programmes can be changed and memorised at any time. To do this, first press the programme button "P" **7** until the display shows the programme you wish to change. Set the chosen airflow and temperature. The memory symbol on the LCD flashes to indicate that the user programme selected has been changed. To record this setting in the selected user programme, press and hold down the programme selector button. The memory symbol continues to flash for approx. 2 seconds. The settings entered have been saved once the memory symbol stays on all the time. To return to normal operation, press the programme button until the number disappears from the top part of the display.

The distance from the object you are working on depends on the material and intended method of working. Always try out the airflow and temperature on a test piece first. Using the attachable accessory nozzles (see accessories) the flow of hot air can be controlled with maximum precision. A small quantity of smoke may occur the first time the tool is used.

Switch the tool OFF by releasing the ON / OFF switch **16**.

Hanger

The integrated ring can be used for hanging the tool.

Caution: max. pulling force = 150 N

LED light

The LED is lit when the tool is switched ON. In addition to illuminating the area you are working on, it also serves as "tool ON" telltale light.

Applications

The hot air tool is ideal for use on smaller-type components and shrink tubing. In particular, it has come to be appreciated by electronics technicians, model-makers, automotive workshops and electrical fitters. Here are just some of its many uses:

Heat-shrinking

- Shrink-fitting connectors for cables and wires.
- Fitting heat-shrinkable products (e.g. heat-shrinkable tubes).

Soldering / de-soldering

- Soldering SMD components.
- Repairs and corrections to electronic SMD assemblies.

Shaping

- Work on plastic parts, e.g. in model-making.

De-icing

- De-icing locks.

Welding (mobile heat MH5 only)

- Welding with welding rods (e.g. PVC, PE, PP, ABS)
- Welding PVC sheeting (e.g. roof membranes, HGV curtain sides/tent tarpaulin)

Heating large areas (mobile heat MH5 only)

- Heating automotive films

Accessories

Your retailer has a wide range of accessories for you to choose from.

- a** Surface nozzle 50 mm, Prod. No. 070113
- b** Surface nozzle 75 mm, Prod. No. 070212
- c** Window nozzle 50 mm, Prod. No. 070311
- d** Window nozzle 75 mm, Prod. No. 070410
- e** Paint scraper kit, Prod. No. 010317
- f** Reflector nozzle, Prod. No. 070519
- g** Crimp connectors
 - Ø 0.5 - 1.5, Prod. No. 006655
 - Ø 1.5 - 2.5, Prod. No. 006648
 - Ø 0.1 - 0.5 - Ø 4.0 - 6.0, Prod. No. 006662
- h** Heat-shrinkable tubes
 - 4.8 - 9.5 mm, Prod. No. 071417
 - 1.6 - 4.8 mm, Prod. No. 071318
 - 4.0 - 12.0 mm, Prod. No. 072766
 Heat-shrinkable tubing set, set of 3, Prod. No. 075811
- i** Soldering reflector nozzle, Prod. No. 074616
- j** Reduction nozzle 14 mm, Prod. No. 070717
- k** Reduction nozzle 9 mm, Prod. No. 070618
- l** Hot air tool guard cage, Prod. No. 053963
- m** Wide-slit nozzle, Prod. No. 074715
- n** Pressure roller
 - Silicone: Prod. No. 006785
 - Rubber: Prod. No. 093211
- o** Plastic welding rod
 - Rigid PVC: Prod. No.. 073114
 - HDPE: Prod. No. 071219
 - PP: Prod. No. 073411
 - ABS: Prod. No. 074210
- p** Welding nozzle, Prod. No. 070915
- q** CAS tool rechargeable battery 18 V 8 Ah
- r** CAS battery charger

Applications

Shrink tubing on cables:

The shrink tubing is slipped over the section you want to insulate and heated with hot air. The tubing shrinks by approx. 50% in diameter to give a sealed union. Shrinking is particularly fast and even using reflector nozzles. Sealing and stabilizing cable breaks, insulating soldered joints, gathering cable runs, sheathing terminal blocks.

Forming PVC:

Sheeting, piping or ski boots can be softened and formed with hot air.

Thawing:

Water pipes, frozen door locks, steps. Gently thaws and dries all in one go.

Soldering:

First, clean metal parts you want to join. Then, using hot air, heat the point you want to solder and offer up the soldering wire. Use flux or a soldering wire with a flux core to prevent oxide forming.

Welding and joining plastic:

All parts being welded must be of the same plastic material. Use an appropriate welding rod.

Joining plastic sheeting:

The sheets are overlapped and welded together. A slit nozzle is used to direct hot air under the overlap, then the two sheets are firmly pressed together with a feed roller.

Also possible: **Repairing PVC tarpaulins** by overlap welding with a slit nozzle.

Shaping:

Ski boots and sports shoes can be shaped for a perfect fit.

Desoldering:

Electronic components are detached quickly and neatly from circuit boards with a reduction nozzle.

Welding sheeting:

The sheets are overlapped and welded together. A slit nozzle is used to direct hot air under the overlap, then the two sheets are firmly pressed together with a feed roller.

Also possible: **Repairing PVC tarpaulins** by overlap welding with a slit nozzle.

Plastic types:		
Material	Application types	Distinguishing characteristics
Rigid PVC	Piping, fittings, boards, building profiles, technical molded components, etc. Welding temperature 550 - 650°F (290 - 345°C)	Incineration test: carbonizes in the flame and extinguishes on its own Smoke odor: pungent, of hydrochloric acid Drop test: crashing
Plasticized PVC	Floor coverings, wallpaper, hoses, sheets, tools, etc. Welding temperature 550 - 650°F (290 - 345°C)	Incineration test: smoking, yellowish-green flame Smoke odor: pungent, of hydrochloric acid Drop test: silent
Plasticized PE (LDPE) Polyethylene	Domestic and electronic items, toys, bottles, etc. Welding temperature 450 - 550°F (230 - 290°C)	Incineration test: light, yellow flame, drops continue to burn Smoke odor: resembles an extinguished candle Drop test: dull
Hard PE (HDPE) Polyethylene	Baths, baskets, canisters, insulating materials, piping, cellar shafts, transport containers, waste bins, etc. Welding temperature 550 - 650°F (290 - 345°C)	Incineration test: light, yellow flame, drops continue to burn Smoke odor: resembles an extinguished candle Drop test: crashing
PP Polypropylene	HT drainpipes, plastic chairs, packaging, car components, equipment housing, technical moldings, battery boxes, etc. Welding temperature 450 - 550°F (230 - 290°C)	Incineration test: light flame with a blue core, drops continue to burn Smoke odor: pungent odor of paraffin Drop test: crashing
ABS	Car components, equipment housing, suitcases Welding temperature 625 - 725°F (330 - 385°C)	Incineration test: black, fluffy smoke Smoke odor: sweetish Drop test: crashing

Limited Warranty

STEINEL warrants its hot air tools, if properly operated and maintained, and used under normal conditions, for a period of one (1) year from the date of purchase. Warranty does not apply to wearable items such as heating elements which require periodic replacement. Specifically **EXCLUDED** from warranty are tools that have been subject to abuse, tools that have been opened or repaired by anyone other than STEINEL, tools that have been modified in any way or mounted onto machinery/equipment, and tools that have been put into continuous operation. These are hand held power tools and are intended for use as such. Any other use voids the STEINEL warranty.

Warranty and Repair Procedures

In the event of product failure, please call STEINEL customer service directly at (800) 852-4343. We will attempt to troubleshoot the difficulty via phone. If warranty work or other repair appears necessary, we will issue an RGA# and we will supply you with a shipping address (postage paid by the customer), with the RGA# clearly marked. You must ship the tool accompanied by a brief description of the difficulty as well as your original dated sales receipt phone number and return address.

When received, STEINEL will diagnose the problem and determine if it is covered under warranty. If we determine that it is covered by warranty, we will repair or replace the defective tool, at our option, and return it to the customer (postage paid by STEINEL). If we determine that the tool is not defective and/or that it is not covered by warranty, we will contact the customer to discuss options prior to performing any repair work not covered under warranty.

All non-warranty repair work is billed at standard rates and will be quoted prior to repair.

Consequential Damages

The company shall not be liable for any incidental or consequential damages arising from the use of the Product by the Purchaser, the breach of any warranties, the failure to deliver, delay in delivery, delivery in non-conforming condition, or for any other breach of contract or duty between the Company and the Purchaser. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Disclaimers of warranties

The warranties contained herein are expressly in lieu of any other expressed or implied warranties, or any other obligation on the part of the Company. Any implied warranty of merchantability or fitness for a particular purpose shall expire one (1) year after the date the product is purchased by the original end-user Purchaser. Any models, drawings, plans, specifications, affirmations of fact, promises, or other communications by the Company with reference to the performance of the product are solely for the convenience of the Purchaser and shall not in any way modify the expressed warranties and disclaimers set forth herein. The Purchaser acknowledges it is purchasing the Product solely on the basis of the commitments of the Company as expressly set forth herein. No agents or other parties are authorized to make any warranties on behalf of the Company or to assume for the Company any other liability in connection with the Product. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Limitation of actions

Any action resulting from the breach of any warranty contained herein by the Company must be commenced within one (1) year after the cause of action arises. In no event shall the Company's total liability for any or all breaches of any warranty exceed the actual purchase price of the Product.

Other rights

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Steinel America Inc.

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1 YEAR
MANUFACTURER'S
WARRANTY

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